```
==============================================================
Sequence Listing could not be accepted due to errors.
See attached Validation Report.
If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).
Reviewer: Anne Corrigan
Timestamp: [year=2010; month=1; day=29; hr=14; min=3; sec=3; ms=685; ]
==============================================================



*************************************************************
Reviewer Comments:
<210> 29
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA fragment

<400> 29
taatacacc                                                      9

Although accepted in a previous submission, the above <223> response is
insufficient:  it is obvious that the sequence is a DNA fragment.  As an
explanation of "Artificial Sequence", please give the source of the
genetic material.  If completely synthesized, please state so.  Same
error in Sequences 31-32.

<210> 101
<211> 41
<212> RNA
<213> Artificial Sequence

<220>
<223> synthetic RNA substrate

<400> 101
aucuaccuga agcgacucau cacttcccgg aagauuacau c                   41

Since the above <212> response is "RNA", no t's are allowed in the
```

sequence. If the sequence is a combined DNA/RNA sequence, please use "<212> DNA", and state in a <220>-<223> section that the sequence is a combined DNA/RNA. Same error in Sequences 104, 113, 120.
****

Application No: 10560303   Version No: 2.0

                    Input Set:

                    Output Set:

            Started: 2010-01-15 15:39:44.106
           Finished: 2010-01-15 15:39:52.076
            Elapsed: 0 hr(s) 0 min(s) 7 sec(s) 970 ms
    Total Warnings: 88
      Total Errors: 6
No. of SeqIDs Defined: 120
  Actual SeqID Count: 120

Error code   Error Description

W   402   Undefined organism found in <213> in SEQ ID (1)

W   402   Undefined organism found in <213> in SEQ ID (2)

W   402   Undefined organism found in <213> in SEQ ID (3)

W   402   Undefined organism found in <213> in SEQ ID (4)

W   402   Undefined organism found in <213> in SEQ ID (5)

W   402   Undefined organism found in <213> in SEQ ID (6)

W   402   Undefined organism found in <213> in SEQ ID (7)

W   402   Undefined organism found in <213> in SEQ ID (8)

W   213   Artificial or Unknown found in <213> in SEQ ID (9)

W   213   Artificial or Unknown found in <213> in SEQ ID (10)

W   213   Artificial or Unknown found in <213> in SEQ ID (11)

W   213   Artificial or Unknown found in <213> in SEQ ID (12)

W   213   Artificial or Unknown found in <213> in SEQ ID (13)

W   213   Artificial or Unknown found in <213> in SEQ ID (14)

W   213   Artificial or Unknown found in <213> in SEQ ID (15)

W   213   Artificial or Unknown found in <213> in SEQ ID (16)

W   213   Artificial or Unknown found in <213> in SEQ ID (17)

W   213   Artificial or Unknown found in <213> in SEQ ID (18)

W   213   Artificial or Unknown found in <213> in SEQ ID (19)

W   213   Artificial or Unknown found in <213> in SEQ ID (20)

```
            Input Set:


            Output Set:



            Started:    2010-01-15 15:39:44.106
           Finished:    2010-01-15 15:39:52.076
            Elapsed:    0 hr(s) 0 min(s) 7 sec(s) 970 ms
     Total Warnings:    88
       Total Errors:    6
No. of SeqIDs Defined:  120
  Actual SeqID Count:   120
```

Error code		Error Description
W	213	Artificial or Unknown found in <213> in SEQ ID (21)
W	213	Artificial or Unknown found in <213> in SEQ ID (22)
W	213	Artificial or Unknown found in <213> in SEQ ID (23)
W	213	Artificial or Unknown found in <213> in SEQ ID (24)
W	213	Artificial or Unknown found in <213> in SEQ ID (25)
W	213	Artificial or Unknown found in <213> in SEQ ID (26)
W	213	Artificial or Unknown found in <213> in SEQ ID (27)
W	213	Artificial or Unknown found in <213> in SEQ ID (28) This error has occured more than 20 times, will not be displayed
W	402	Undefined organism found in <213> in SEQ ID (39)
W	402	Undefined organism found in <213> in SEQ ID (43)
W	402	Undefined organism found in <213> in SEQ ID (44)
W	402	Undefined organism found in <213> in SEQ ID (46)
W	402	Undefined organism found in <213> in SEQ ID (50)
W	402	Undefined organism found in <213> in SEQ ID (51)
W	402	Undefined organism found in <213> in SEQ ID (54)
W	402	Undefined organism found in <213> in SEQ ID (55)
W	402	Undefined organism found in <213> in SEQ ID (56)
W	402	Undefined organism found in <213> in SEQ ID (59)
W	402	Undefined organism found in <213> in SEQ ID (61)
W	402	Undefined organism found in <213> in SEQ ID (62) This error has occured more than 20 times, will not be displayed
E	256	't' found in RNA; POS (24) SEQID(101)

```
            Input Set:


           Output Set:



            Started:   2010-01-15 15:39:44.106
           Finished:   2010-01-15 15:39:52.076
            Elapsed:   0 hr(s) 0 min(s) 7 sec(s) 970 ms
     Total Warnings:   88
       Total Errors:   6
 No. of SeqIDs Defined:  120
   Actual SeqID Count:   120
```

Error code   Error Description

```
E   256       't' found in RNA; POS (25) SEQID(101)

E   256       't' found in RNA; POS (20) SEQID(104)

E   256       't' found in RNA; POS (3) SEQID(113)

E   256       't' found in RNA; POS (13) SEQID(120)

E   256       't' found in RNA; POS (17) SEQID(120)
```

<210> 1
<211> 336
<212> DNA
<213> E. coli

<400> 1
atggtaagcc gatacgtacc cgatatgggc gatctgattt gggttgattt tgacccgaca 60
aaaggtagcg agcaagctgg acatcgtcca gctgttgtcc tgagtccttt catgtacaac 120
aacaaaacag gtatgtgtct gtgtgttcct tgtacaacgc aatcaaaagg atatccgttc 180
gaagttgttt tatccggtca ggaacgtgat ggcgtagcgt tagctgatca ggtaaaaagt 240
atcgcctggc gggcaagagg agcaacgaag aaaggaacag ttgccccaga ggaattacaa 300
ctcattaaag ccaaaattaa cgtactgatt gggtag   336

<210> 2
<211> 111
<212> PRT
<213> E. coli

<400> 2
Met Val Ser Arg Tyr Val Pro Asp Met Gly Asp Leu Ile Trp Val Asp
 1   5   10   15
Phe Asp Pro Thr Lys Gly Ser Glu Gln Ala Gly His Arg Pro Ala Val
            20   25   30
Val Leu Ser Pro Phe Met Tyr Asn Asn Lys Thr Gly Met Cys Leu Cys
        35   40   45
Val Pro Cys Thr Thr Gln Ser Lys Gly Tyr Pro Phe Glu Val Val Leu

```
            50                    55                    60
Ser Gly Gln Glu Arg Asp Gly Val Ala Leu Ala Asp Gln Val Lys Ser
65                    70                    75                    80
Ile Ala Trp Arg Ala Arg Gly Ala Thr Lys Lys Gly Thr Val Ala Pro
                      85                    90                    95
Glu Glu Leu Gln Leu Ile Lys Ala Lys Ile Asn Val Leu Ile Gly
                      100                   105                   110
```

<210> 3
<211> 333
<212> DNA
<213> E. coli

<400> 3
```
atggaaagag gggaaatctg gcttgtctcg cttgatccta ccgcaggtca tgagcagcag 60
ggaacgcggc cggtgctgat tgtcacaccg gcggccttta tcgcgtgac ccgcctgcct 120
gttgttgtgc ccgtaaccag cggaggcaat tttgcccgca ctgccggctt tgcggtgtcg 180
ttggatggtg ttggcatacg taccacaggt gttgtacgtt gcgatcaacc ccggacaatt 240
gatatgaaag cacggggcgg aaaacgactc gaacgggttc cggagactat catgaacgaa 300
gttcttggcc gcctgtccac tattctgact tga                               333
```

<210> 4
<211> 110
<212> PRT
<213> E. coli

<400> 4
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Met Glu Arg Gly Glu Ile Trp Leu Val Ser Leu Asp Pro Thr Ala Gly
 1               5                   10                  15
His Glu Gln Gln Gly Thr Arg Pro Val Leu Ile Val Thr Pro Ala Ala
                 20                  25                  30
Phe Asn Arg Val Thr Arg Leu Pro Val Val Val Pro Val Thr Ser Gly
            35                  40                  45
Gly Asn Phe Ala Arg Thr Ala Gly Phe Ala Val Ser Leu Asp Gly Val
     50                  55                  60
Gly Ile Arg Thr Thr Gly Val Val Arg Cys Asp Gln Pro Arg Thr Ile
65                  70                  75                  80
Asp Met Lys Ala Arg Gly Gly Lys Arg Leu Glu Arg Val Pro Glu Thr
                 85                  90                  95
Ile Met Asn Glu Val Leu Gly Arg Leu Ser Thr Ile Leu Thr
                 100                 105                 110
```

<210> 5
<211> 249
<212> DNA
<213> E. coli

<400> 5
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atgatccaca gtagcgtaaa gcgttgggga aattcaccgg cggtgcggat cccggctacg 60
ttaatgcagg cgctcaatct gaatattgat gatgaagtga agattgacct ggtggatggc 120
```

aaattaatta ttgagccagt gcgtaaagag cccgtattta cgcttgctga actggtcaac 180
gacatcacgc cggaaaacct ccacgagaat atcgactggg gagagccgaa agataaggaa 240
gtctggtaa   249

<210> 6
<211> 82
<212> PRT
<213> E. coli

<400> 6
Met Ile His Ser Ser Val Lys Arg Trp Gly Asn Ser Pro Ala Val Arg
1   5   10   15
Ile Pro Ala Thr Leu Met Gln Ala Leu Asn Leu Asn Ile Asp Asp Glu
            20   25   30
Val Lys Ile Asp Leu Val Asp Gly Lys Leu Ile Ile Glu Pro Val Arg
        35   40   45
Lys Glu Pro Val Phe Thr Leu Ala Glu Leu Val Asn Asp Ile Thr Pro
    50   55   60
Glu Asn Leu His Glu Asn Ile Asp Trp Gly Glu Pro Lys Asp Lys Glu
65   70   75   80
Val Trp

<210> 7
<211> 258
<212> DNA
<213> E. coli

<400> 7
atgcatacca cccgactgaa gagggttggc ggctcagtta tgctgaccgt cccaccggca 60
ctgctgaatg cgctgtctct gggcacagat aatgaagttg gcatggtcat tgataatggc 120
cggctgattg ttgagccgta cagacgcccg caatattcac tggctgagct actggcacag 180
tgtgatccga atgctgaaat atcagctgaa gaacgagaat ggctggatgc accggcgact 240
ggtcaggagg aaatctga   258

<210> 8
<211> 85
<212> PRT
<213> E. coli

<400> 8
Met His Thr Thr Arg Leu Lys Arg Val Gly Gly Ser Val Met Leu Thr
1   5   10   15
Val Pro Pro Ala Leu Leu Asn Ala Leu Ser Leu Gly Thr Asp Asn Glu
            20   25   30
Val Gly Met Val Ile Asp Asn Gly Arg Leu Ile Val Glu Pro Tyr Arg
        35   40   45
Arg Pro Gln Tyr Ser Leu Ala Glu Leu Leu Ala Gln Cys Asp Pro Asn
    50   55   60
Ala Glu Ile Ser Ala Glu Glu Arg Glu Trp Leu Asp Ala Pro Ala Thr
65   70   75   80
Gly Gln Glu Glu Ile
                85

<210> 9
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> T54 to K77 fragment of E. coli MazE

<400> 9
Thr Leu Ala Glu Leu Val Asn Asp Ile Thr Pro Glu Asn Leu His Glu
 1   5   10   15
Asn Ile Asp Trp Gly Glu Pro Lys
            20

<210> 10
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> N60 to K77 fragment of E. coli MazE

<400> 10
Asn Asp Ile Thr Pro Glu Asn Leu His Glu Asn Ile Asp Trp Gly Glu
 1   5   10   15
Pro Lys

<210> 11
<211> 30
<212> RNA
<213> Artificial Sequence

<220>
<223> synthetic RNA substrate

<400> 11
uaagaaggag auauacauau gaaucaaauc   30

<210> 12
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> single stranded oligonucleotide

<400> 12
gctcgtatct acaatgtaga ttgatatata ctgtatctac atatgatagc   50

<210> 13
<211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> single stranded oligonucleotide

<400> 13
cgagcataga tgttacatct aactatatat gacatagatg tatactatcg   50

<210> 14
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 14
agatctcgat cccgcaaatt aat   23

<210> 15
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 15
ttagagatca atttcctgcc gttttac   27

<210> 16
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 16
ttaaagatcg tcaacgtaac cg   22

<210> 17
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 17
tgctctttat cccacgggca gc   22

<210> 18
<211> 24

<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 18
gcccagttca ccgcgaagat cgtc   24

<210> 19
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 19
ggttttgatt tgctcccaac gggcaag   27

<210> 20
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 20
catttcctcc tccagtttag cctggtc   27

<210> 21
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 21
ttgccagact tcttccattg tttcgag   27

<210> 22
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 22
gatccccaca atgcggtgac gagt   24

<210> 23
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 23
cacgttgtcc actttgttca ccgc   24

<210> 24
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 24
cagttcagcg ccgaggaaac gcat   24

<210> 25
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 25
gcgttcgtcg tcggcccaac cgga   24

<210> 26
<211> 30
<212> RNA
<213> Artificial Sequence

<220>
<223> antisense RNA

<400> 26
gauuugauuc auauguauau cuccuucuua   30

<210> 27
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> complementary DNA

<400> 27
gatttgattc atatgtatat ctccttctta   30

<210> 28
<211> 22
<212> DNA
<213> Artificial Sequence

<220>

<223> DNA primer

<400> 28
agaatgtgcg ccatttttca ct   22

<210> 29
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA fragment

<400> 29
taatacacc   9

<210> 30
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 30
atgaatcaca aagtg   15

<210> 31
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA fragment

<400> 31
catcatcatc atcatcat   18

<210> 32
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA fragment

<400> 32
atcgaaggta gg   12

<210> 33
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> multiple cloning site

<400> 33
catatggagc tcggtaccct cgagggatcc gaattcaagc ttgtcgacct gcagtctaga 60

<210> 34
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 34
caggagauac cucaaugauc a   21

<210> 35
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 35
ctcaatgatc acaggagata c   21

<210> 36
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 36
tcctctatgg agttactagt g   21

<210> 37
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 37
gggacaggag atacct   16

<210> 38
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA primer

<400> 38
tgtcctctat ggagttacta gtg   23

<210> 39
<211> 330
<212> DNA
<213> Bacillus halodurans

<400> 39
atgccagtac cggatagagg gaatcttgtt tatgtagact ttaacccaca atcgggtcat 60
gaccaagccg ggacacgacc ggctattgtt ttgtcccta aattatttaa taaaaacaca 120
ggttttgcgg tggtttgtcc aattaccaga caacaaaaag gttatccttt tgaaatagaa 180
ataccaccgg ggttacctat tgaaggggtt attcttactg accaagtaaa aagtctggat 240
tggagagcaa gaaactttca cattaaagga caagcaccag aggaaactgt tactgattgt 300
ttacaactta ttcatacatt tttatcttaa   330

<210> 40
<211> 363
<212> DNA
<213> Staphylococcus epidermidis

<400> 40
atgattagaa gaggagatgt ttatttagcg gatttatcac cagttcaagg gtctgaacaa 60
gggggagtaa gacctgtagt tatcattcaa aatgatactg gtaataaata tagtccaact 120
gtaattgtag ctgcgattac tgatgggatt aataaagcga aaataccaac ccacgtagaa 180
attgaaaaga aaaagtataa attagacaaa gattcagtta ttcttcttga acaaattaga 240
acactagata aaaagcgttt aaaagaaaaa ttaacatttt tatcagagag taaaatgata 300
gaggttgata atgccttaga tattagtttg ggattaaata actttgatca tcataaatct 360
taa   363

<210> 41
<211> 411
<212> DNA
<213> Staphylococcus aureus

<400> 41
atgattagac gaggagatgt ttatttagca gatttatcac cagtacaggg atctgaacaa 60
gggggagtca gacctgtagt cataattcaa aatgatactg gtaataaata tagtcctaca 120
gttattgttg cggcaataac tggtaggatt aataaagcga aaataccgac acatgtagag 180
attgaaaaga aaaagtataa gttggataaa gactcagtta tattattaga acaaattcgt 240
acacttgata aaaacgatt gaaagaaaaa ctgacgtact atccgatga taaaatgaaa 300
gaagtagata atgcactaat gattagttta gggctgaatg cagtagctca accagaaaaa 360
ttaggcgtct attatatgta tttttcagag ataaataaaa tattgatata a   411

<210> 42
<211> 351
<212> DNA
<213> Bacillus subtilis

<400> 42
ttgattgtga aacgcggcga tgtttatttt gctgatttat ctcctgttgt tggctcagag 60
caaggcgggg tgcgcccggt tttagtgatc caaaatgaca tcggaaatcg cttcagccca 120
actgctattg ttgcagccat aacagcacaa atacagaaag cgaaattacc aacccacgtc 180
gaaatcgatg caaaacgcta cggttttgaa agagattccg ttattttgct ggagcaaatt 240
cggacgattg acaagcaaag gttaacggat aagattactc atctggatga tgaaatgatg 300
gataaggttg atgaagcctt acaaatcagt ttggcactca ttgattttta g   351

<210> 43
<211> 324
<212> DNA
<213> Neisseria meningitides

<400> 43
atggatatgg tagtacgcgg cggaatctat ctggtctcct tagacccgac cgtaggaagc 60
gaaatcaaaa agacacgtcc ttgtgtcgta gtctctcctc ctgaaataca caactatctc 120
aagactgtgc tgatcgttcc catgacgagc ggaagccgtc ctgccccgtt ccgcgtcaat 180
gtccgctttc aggataaaga cggtttgctt ttgcccgaac agattagggc tgtggataaa 240
gccggattgg tcaaacatct tggcaattta gacaacagta cggctgaaaa actgtttgca 300
gtattgcagg agatgtttgc ctga 324

<210> 44
<211> 366
<212> DNA
<213> Morganella morgani

<400> 44
atgcgccggc ggctggtcag gaggaaatct gacatggaaa gaggggaaat ctggcttgtc 60
tcgcttgacc ctaccgcagg tcatgagcag cagggaacgc ggccggtact gattgtcacg 120
ccggctgctt ttaaccgcgt gacccgcctg cctgttgttg tgcccgtgac cagcggaggt 180
aattttgccc gcacagcagg ctttgctgtg tcgcttgacg gcgccggcat acgtaccacc 240
ggcgttgtgc gttgcgatca accccggacg atcgatatga aagcccgcgg cggcaaacga 300
ctcgaacggg tgccagagac tatcatggac gacgttcttg ccgtctggc caccatcctg 360
acctga 366

<210> 45
<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 45
gtggtgattc ggggagcggt ctacagggtc gacttcggcg atgcgaagcg aggccacgag 60
caacgcgggc ggcgctacgc cgtggtcatc agccccggct cgatgccgtg gagtgtagta 120
accgtggtgc cgacgtcgac aagcgcccaa cctgcggttt tccgaccaga gctggaagtc 180
atgggaacaa agacacggtt cctggtggat cagatccgga cgatcggcat cgtctatgtg 240
cacggcgatc cggtcgacta tctggaccgt gaccaaatgg ccaaggtgga acacgccgtg 300
gcacgatacc ttggtctgtg a 321

<210> 46
<211> 109
<212> PRT
<213> Bacillus halodurans

<400> 46
Met Pro Val Pro Asp Arg Gly Asn Leu Val Tyr Val Asp Phe Asn Pro
1   5   10   15
Gln Ser Gly His Asp Gln Ala Gly Thr Arg Pro Ala Ile Val Leu Ser
            20   25   30
Pro Lys Leu Phe Asn Lys Asn Thr Gly Phe Ala Val Val Cys Pro Ile
        35   40   45
Thr Arg Gln Gln Lys Gly Tyr Pro Phe Glu Ile Glu Ile Pro Pro Gly
    50   55   60
Leu Pro Ile Glu Gly Val Ile Leu Thr Asp Gln Val Lys Ser Leu Asp
65   70   75   80

Trp Arg Ala Arg Asn Phe His Ile Lys Gly Gln Ala Pro Glu Glu Thr
                85   90   95
Val Thr Asp Cys Leu Gln Leu Ile His Thr Phe Leu Ser
            100   105

<210> 47
<211> 120
<212> PRT
<213> Staphylococcus epidermidis

<400> 47
Met Ile Arg Arg Gly Asp Val Tyr Leu Ala Asp Leu Ser Pro Val Gln
 1   5   10   15
Gly Ser Glu Gln Gly Gly Val Arg Pro Val Val Ile Ile Gln Asn Asp
            20   25   30
Thr Gly Asn Lys Tyr Ser Pro Thr Val Ile Val Ala Ala Ile Thr Asp
        35   40   45
Gly Ile Asn Lys Ala Lys Ile Pro Thr His Val Glu Ile Glu Lys Lys
    50   55   60
Lys Tyr Lys Leu Asp Lys Asp Ser Val Ile Leu Leu Glu Gln Ile Arg
65   70   75   80
Thr Leu Asp Lys Lys Arg Leu Lys Glu Lys Leu Thr Phe Leu Ser Glu
                85   90   95
Ser Lys Met Ile Glu Val Asp Asn Ala Leu Asp Ile Ser Leu Gly Leu
            100   105   110
Asn Asn Phe Asp His His Lys Ser
        115   120

<210> 48
<211> 136
<212> PRT
<213> Staphylococcus aureus

<400> 48
Met Ile Arg Arg Gly Asp Val Tyr Leu Ala Asp Leu Ser Pro Val Gln
 1   5   10   15
Gly Ser Glu Gln Gly Gly Val Arg Pro Val Val Ile Ile Gln Asn Asp
            20   25   30
Thr Gly Asn Lys Tyr Ser Pro Thr Val Ile Val Ala Ala Ile Thr Gly
        35   40   45
Arg Ile Asn Lys Ala Lys Ile Pro Thr His Val Glu Ile Glu Lys Lys
    50   55   60
Lys Tyr Lys Leu Asp Lys Asp Ser Val Ile Leu Leu Glu Gln Ile Arg
65   70   75   80
Thr Leu Asp Lys Lys Arg Leu Lys Glu Lys Leu Thr Tyr Leu Ser Asp
                85   90   95
Asp Lys Met Lys Glu Val Asp Asn Ala Leu Met Ile Ser Leu Gly Leu
            100